

MANAGEMENT TOOLS

Data Processing - Introduction to Automation all copies

Some call it I.D.P., (Integrated Data Processing), some call it E.D.P. (Electronic Data Processing), and still others call it A.D.P. (Automatic Data Processing). In all cases Data Processing is the function of recording, moving, storing, and using information and has been going on since man first learned to scratch pictures in rock. With the increasingly complicated socio-economic developments of this era, the problems of Data Processing have become incredibly involved and hand-processing of data is, in most cases, no longer economically sound. It simply costs too much and the results are rarely available ^{for} management use on a timely basis.

Everyone is familiar, to some degree at least, with the tremendous strides ~~which have been made~~ in the production and distribution of all kinds of products of industry, ~~which are so widely used today.~~ The management of records or paperwork has admittedly not kept pace with technological developments in other fields, and this is as true in government as it is in private industry. Machines are commonly used to produce things rapidly, to transmit information quickly over long distances, and to distribute products on a timely basis. The next step is logical and inevitable. Machines must be used to process data if production and distribution of things is not to bog down in a sea of manually managed paperwork.

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Although, in its present context, machine management of data is a relatively new field, it is based on principles of automatic and semi-automatic machine operations which people have accepted for years: the typewriter, the adding machine, thermostats or the automatic setting of off-on electrical switches, the player piano, and wire communications machines. In each of these heretofore different fields of relative automation, people have provided the only link between one field and another. Today, it is possible to mechanically or electrically link machines in these various fields and use them automatically or ~~semi~~ semiautomatically to do, with minimum human intervention, one integrated paperwork-processing job. Obviously, great strides have been made in the development of such machines to permit them to be so used, but there is nothing really mysterious about them. People are still needed to supervise ^{the} operation of these machines and a whole new industry provides employment to more than compensate for the gradual decrease in office personnel which increased use of machine-processing of data will bring.

Even though the field is a relatively new one, there are all sorts of machines and systems for Data Processing which have been developed by the various manufacturers in collaboration with actual or potential customers. Some kinds of paperwork jobs lend themselves to machines more easily than others, and these are the ones which are usually ~~used~~ integrated into a machine system first. In all cases, however, much study is required before a sound decision can be made on:

1. Which paperwork procedures are logical ones for machine application in a given industry or govern-ment agency?
2. Which machine or machines will do the job most effectively?
3. What provisions, if any, should be made now for future expansion?
4. Will the savings be substantial enough to warrant the kind of investment required. (These things are expensive).

There are a number of machine applications to paperwork now being used in both industry and government; in some areas of paperwork, the savings are already apparent, in others there are still obstacles to be overcome.

It was stated initially that some people call machine processing I.D.P., some call it E.D.P. and some call it A.D.P. The basic objectives of all are the same and they have many procedures in common; however, they are somewhat different. Electronic Data Processing always involves electronic manipulation of information; Automatic Data Processing may or may not involve electronic equipment; usually it is concerned with various electrically operated mechanical machines; Integrated Data Processing ~~is~~ ~~more descriptive in that it~~ describes the integration of various data into one system which may employ electronic, electric, or electro-mechanical machines, or a judicious combination of all three. In all cases, of course,

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the human element remains of significant importance. People are what make machines work.

Subsequent articles will deal with various aspects of I.D.P. in more detail and will include brief, simple descriptions of the major types of available equipment and their most efficient uses.

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